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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,780	03/21/2006	Takeshi Iwasaki	Q77750	9557

23373 7590 05/13/2008

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EXAMINER	
HARRIS, GARY D	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
05/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/572,780	IWASAKI ET AL.	
	Examiner	Art Unit	
	GARY D. HARRIS	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/28/2007, 3/21/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/574,573. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are claiming a ferromagnetic material having two kinds of oxide in the grain boundary. It would have been obvious to one skilled in the art to require a perpendicular magnetic recording medium having a ferromagnetic crystal structure with crystal grain boundaries encompassing two kinds of oxide.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7 & 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakazawa et al. US 6,689,456.

As to Claim 1, Nakazawa et al. '456 teaches a perpendicular magnetic recording (Col. 17, Line 23-41) with a nonmagnetic underlayer (Col. 1, Line 38-47) and crystal structure with two different oxides used in the grain boundary regions (Col. 7, Line 34-50) and would therefore encompass applicants claim.

As to Claim 2, Nakazawa et al. '456 discloses multiple oxide materials used to form grain boundary regions (Col. 2, 3 Line 65-67, 1-11 respectively) (see tables 1, 2 & 3).

As to Claim 3, Nakazawa et al. '456 discloses a two group system similar to applicants to improved matching and can be obtained using the addition of Ti, V, Mo, Mn, B, or W in the Cr component of the Cr-Ti alloy material (Col. 14, Line 23-28).

As to Claim 4, Nakazawa et al. '456 teaches oxides selected to improve matching including W in the Cr component of a Cr-Ti alloy system (Col. 14, Line 23-28), (Col. 11, 12, Table 2).

As to Claim 5, Nakazawa et al. '456 discloses the use of SiO_2 (Si oxide) (Col. 11, Line 20-25), Cr and Ta oxide (Col. 10 Line 1-3).

As to Claim 7, Nakazawa et al. '456 discloses molar parts (mole percentages) smaller than main component (Col. 13, Line 41-46).

As to Claim 11, Nakazawa et al. '456 discloses a CoPt alloy (Col. 3, Line 12-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6, 8-10 & 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazawa et al. '456 and further in view of Takahashi et al. US 2005/0227122.

As to Claim 6, Nakazawa et al. '456 does not disclose the oxide of Group A is smaller in percentage than group B. However, Nakazawa et al. '456 discloses disclosed that W would be an addition to the alloy which examiner interprets to be less than the Group B percentages in order to improve matching between inorganic compounds (Col. 14, Line 23-28). It would have been obvious to optimize mole percentages in order to improve matching between inorganic compounds. Additionally, this would be a results effective variable MPEP 2144.05 that would be optimized by one of ordinary skill in the art through routine experimentation.

As to Claim 8-10, Nakazawa et al. '456, does not disclose the stoichiometric ratios but, discloses manipulating oxides in order to better match the intermediate layer (Col. 3, Line 53-58). It would be obvious to manipulate ratios in order to better match the intermediate layer. It has been held that where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the burden of proof is shifted to applicant to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC §102 or on prima facie obviousness under 35 USC §103, jointly or alternatively. *In re Best, Bolton, and Shaw*, 195 USPQ 430. (CCPA 1977).

With respect to claims 14 & 15, the intended use of the instantly claimed apparatus is noted, however, the intended use does not patentably distinguish said claimed apparatus over prior art. The intended use of the claims does not structurally limit the apparatus. In addition, the prior art apparatus is capable of performing the desired function.

Claims 12 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazawa et al. '456 and further in view of Takahashi et al. US 2005/0227122

As to Claim 12 & 13, Nakazawa et al. '456 discloses underlayers but does not disclose the use of Ru. However, Ru is commonly used as an underlayer material in magnetic recording. Takahashi et al. US '122 teaches perpendicular magnetic recording utilizing two differing oxides (Paragraph 19) underlayers with elements including Ru (Paragraph 23, 72) and soft magnetic layer materials (Paragraph 6) used to enhance density (Paragraph 2). It would have been obvious to one skilled in the art to require the use of Ru as a major component and provide a soft magnetic underlayer in order to enhance the density as taught by Takahashi et al. '122. It has been held that "it is prima facie obvious to combine two compositions each of which is taught by prior art to be useful for same purpose in order to form third composition that is to be used for very same purpose; idea of combining them flows logically from their having been individually taught in prior art." In re Kerkhoven, 205 USPQ 1069 (C.C.P.A. 1980).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GARY D. HARRIS whose telephone number is (571)272-6508. The examiner can normally be reached on 8AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith D. Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary D. Harris/
Examiner, Art Unit 1794

/Holly Rickman/
Primary Examiner, Art Unit 1794